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ABSTRACT

A study investigated the goals, implementation strategies, and possible obstacles to implementing vocational education in secondary schools in Zimbabwe. All 13 secondary schools that were piloting vocational education were used as the base for this study. Three of those schools were selected as case study schools. Data were collected through interviews with education officers, task force officials, and curriculum development unit officials and through questionnaires completed by headmasters and teachers. The total number of respondents was 73. In the three case schools, workshops, available machines, workshop equipment, texts, and store-room materials were studied. The following are among the conclusions reported: (1) implementation of vocational education was proving to be difficult, and it was evident that problems should be resolved before more schools were involved in the implementation; (2) among the difficulties were shortages (of machines, books, materials, and qualified staff) and poor planning due to top government officials making decisions with little input from the field; (3) respondents were very familiar with the term vocational education; (4) respondents had different views about the aims of vocational education and differed in their answers as to whether they were fulfilling the aims and objectives set for the program; and (5) no inservice training had prepared teachers for the new program. (The document contains a 44-item reference list.) (Author/CML)

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The implementation of vocational education in pilot secondary schools with special reference to woodwork

Stenford Museva

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THE IMPLEMENTATION OF VOCATIONAL EDUCATION IN PILOT SECONDARY SCHOOLS WITH SPECIAL REFERENCE TO WOODWORK

Stenford Museva

DISSERTATION
submitted as partial fulfilment for an
MA DEGREE IN WOODWORK EDUCATION

LINKÖPING UNIVERSITY
Department of Education and Psychology
REPORT LiU-PEK-R-142

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THE IMPLEMENTATION OF VOCATIONAL EDUCATION IN PILOT SECONDARY SCHOOLS WITH SPECIAL REFERENCE TO WOODWORK

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Sammanfattning (högst 150 ord):
Abstract (150 words): The purpose of this research study was to find out the goals, implementation strategies and the possible obstacles (constraints) of implementing Vocational Education in pilot secondary schools. Altogether th irteen pilot schools were used in the total study of which three were chosen as case schools. Two schools did not return the questionnaires. The total number of subjects was seventy-three. This included teachers, headmasters, Central Task Force officials, Education Officers Technical Subjects, Education Officers Planning division, and Regional Task Force officials.
The instruments used for collecting the data were interviews, open-ended questionnaires, and documents from the Ministry of Education. In the three case schools, the author studied the workshops, the machines available and what condition they were in, other workshop equipment, text-books and the stock of materials in the store-rooms.
It was revealed through this study that the implementation of vocational education in the pilot schools was proving to be difficult. Contributing factors to the problems were spelt out as; lack of funds to purchase materials, some machines being out of order (not working); shortage of text-books and tools, as well as of skilled personnel. The time allotted to the programme was considered very little to cover the syllabus.
A lot of problems are encountered in the implementation of vocational education in the pilot secondary schools.

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FOREWORD

This Master of Arts dissertation was prepared within the framework of a bilateral cooperation project between Sweden and Zimbabwe. The Swedish International Development Authority - SIDA - provided financial support for the project.

Linköping University has been responsible for the education in cooperation with the University of Gothenburg. Fifteen students participated in the programme. Three students completed the main part of their education at University of Gothenburg. Twelve students completed their education at Linköping University.

For the twelve Linköping University students, the Department of Crafts and Design held the major responsibility for the courses. The exceptions being the course in research methodology and the actual preparation of the dissertations where the Department of Education and Psychology was responsible. Facilities for the fieldwork were provided by the University of Zimbabwe.

The Department of Crafts and Design has been the host department and responsible for the administration and coordination of the programme.

Linköping May 16, 1989

Bengt Wetterstrand
Head of Department
Dept of Crafts and Design

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Professor and Examiner
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1. BACKGROUND AND PURPOSE

1.1 Introduction

Practical subjects like agriculture and wood carving were introduced in the schools before the Phelps-Stroke commission of the 1920's. Phelps-stroke was a charitable fund set up in America to improve native education in British and French colonies in Africa. The aim was to adapt education to societal conditions. In this way, it was hoped the education received would enable people to improve their living conditions. They would be able to build themselves good houses out of bricks, grow vegetables for their own consumption and for sale. Last but not least, home hygiene was stressed in the education for girls. (see King 1971)

Gradually these practical subjects mainly taught in primary education were also introduced in secondary schools. Workshops were established and modern tools such as planes, hand and electric drills, work benches, try squares and so on were used. This had not been the case with the traditional practical work (hand-work) where axes, adze and unseasoned timber were used for making different articles.

However, although practical subjects like wood work, metal work, and building continue to be taught pupils leaving secondary schools for the world of work are found to lack the qualities the employers need to run their business enterprises or industries.

It is for this reason that the government is working on a strategy to vocationalize its education system. The attempt is to make education received in secondary schools more relevant to the world of work. It is assumed this may help reduce the number of unemployed school leavers which is currently said to be reaching alarming figures. (see Senior Minister of Finance, Economic Planning and Development speech quoted in the Chronicle of Friday July 29 1988 p.1)

This study should help improve planning strategies of the Ministry of Higher Education in the event that the number of schools in this project should be increased. This planning should include the in-service training of teachers well in advance.

Experience elsewhere has shown that such programmes in developing countries often do not take this need sufficiently into account. Teachers must be trained well ahead: if they are not, then hired labour from abroad is called to give assistance. That these people will be new and unfamiliar with the problems means they may be of very little assistance.

It is acknowledged that for any successful implementation of new programmes, there is a great need to educate and disseminate information to the public before the changes are put into effect. (see for instance Ellström, 1984, Fullan and Pomfet, 1981) This is important because when people know the purpose of change, and the intended benefits they may feel more committed to it.

Planning in most cases is done at the top, without the knowledge of the general public for whom such plans are made. Zvobgo, (1986) says that decisions and policies are always imposed on the public from the top without any consultation. The end result may be resistance in one way or another leading to the downfall of the intended changes, frustration, and a waste of funds and effort.

The study will review vocational education in countries such as Germany, England, and France where it is said to be operating successfully. Those responsible for educational planning in Zimbabwe could learn which strategies were adopted and which succeeded. Although we differ politically and economically, this knowledge could be useful to our education planners when they consider possible solutions and strategies that could be applicable to our own home situations.

It is acknowledged that most new educational programmes have failed, particularly those in developing nations. Contributing reasons could be that there is lack of people with the requisite knowledge, or that education planners simply transplant systems they have seen operating successfully in other countries in their own countries. They hope that the systems will yield the same results. Good planning must recognize constraints and limitations. Planners must be expert and sensitive to local conditions if new schemes are to work. They must foresee the consequences of ambitions plans. Whilst the attempts by the government are to make school education relevant to the world of work, it is important to find out how this is going to be worked. Implementation of such programmes might not be easy. It is this issue that prompted this research.

1.2 Research question

WHAT ARE THE GOALS, IMPLEMENTATION STRATEGIES AND THE POSSIBLE OBSTACLES (CONSTRAINTS) OF IMPLEMENTING VOCATIONAL EDUCATION IN SECONDARY SCHOOLS?

2. VOCATIONAL EDUCATION AND IMPLEMENTATION

The key words of the research question are; vocational education, goals, possible obstacles and implementation strategies. For a clearer understanding of the topic under study, it is necessary to define these terms.

2.1 Vocational education

The term "vocationalization" has been defined by Bacchus (1988, p.31) as "efforts by schools to include in their curriculum those "practical" subjects which are likely to generate among the students some basic knowledge, skills and dispositions that might prepare them to think of becoming skilled workers or to enter other manual occupations." He went further to say, "The inclusion of practical or industrial arts subjects especially in the curriculum of secondary schools as part of the programme of general education is considered an essential element in the vocationalizing of education."

Many authors share the same view that vocational education is skill training aimed at producing workers for industries, or who can be self-employed. Whilst this is the common definition used in schools and other work places, that of ORYSHKEWYCH (1982) seems to be complete, clear and comprehensive. He defines vocational education, or trade, or industrial training as "instruction that is intended to fit persons for industrial or commercial occupations." While it can be argued that many people associate this training with only schools and industries, ORYSHKEWYCH suggests five possible ways of securing this type of training. These are as follows, (1) learning can be done on the job without any educational supervision; (2) it can be acquired in training programmes, departments, or schools maintained by employers; (3) learning as apprentices; that is, being attached to both the industry and the Polytechnic Colleges in order to acquire both the theoretical and practical experience, (4) learning in a trade, technical secondary continuation or night schools; and learning in shops and schools, according to some cooperative arrangement between industrial establishments and the schools.

This concept of vocationalizing education is a theme discussed in the educational circles of both developed and developing nations. The question we should address to ourselves is why vocationalize the education systems?

Different opinions in an attempt to answer the question are still being discussed widely in the international literature. For example, Gallinelli (1979) points out that many children could not benefit from the classical education which was offered by schools. This finding resulted in a practical approach

being tried in the education system. He also blames the curriculum which he says was too "bookish", it stressed words rather than ideas and lacked activity. Other writers like Tanner and Tanner (1975) blame the schools for not being concerned about occupational preparation: they instead emphasize improving the academic disciplines. (subjects)

Many writers contend that the aim of vocational training is to inculcate skills to pupils in the use of hand and machine tools. It is believed that vocational training will broaden the pupils occupational choices and promote occupational mobility in the world of work. (Morphet and Ryan, 1979, Doherty, 1985) Aleong (1988) says that vocational training in developing countries could be a vehicle through which the manpower requirements of the country could be obtained. The skills pupils acquire during their training could be useful in the industries.

In the event of the pupils failing to secure a job in industry (modern sector employment) the advocates of vocational education, the politicians, the education planners and the international development cooperation experts assume the training received would still enable the pupils to be useful citizens. The belief is that pupils would make use of the skills learnt in schools probably as self - employed workers in their own home areas. (see for instance Hummel (1977) and Doherty (1985)). Thompson (1981) and Lillis (1982) share the same view. This training which could help in promoting self employment would also generate economic activities in the local communities and hence reduce the rate of migration to towns.

In America, vocational education is said to have been originally designed to help the academically weak pupils. Pupils who could not cope with rigorous academic work were channelled into vocational subjects. The hope was that the skills imparted to the pupils would help them secure employment. It is acknowledged that the development of vocational education in this country was influenced by the Swedish sloyd in the years between 1880's and 1890's. Sloyd is a complex term. In the nineteenth century it meant craftwork done by hand and industrial machines (Sjögren, 1987). The aim was to instill manual skills and a love of work in the pupils. The Swedish Academy Dictionary (Svenska Akademiens Ordbok, 1981) in Sjögren (1987) says sloyd is carrying out non-professional, manual production of objects, for example, working with wood or metal or sewing and weaving. According to Sjögren, the term sloyd in (swedish) schools refers to the art of teaching creativity, artistic education, practical skills, consumer education, cultural and social education. Literally the term sloyd refers to skill or dexterity. Its acceptance in the American system of education was a result of the contribution it was seen to make on the mental and physical development of the child. (see Wilms 1988)

The assumption that vocational education would help reduce social problems such as unemployment, the shortage of middle skilled workers, as well as racial and sex discrimination seems to have its origins in socialist-marxist ideology. This ideology believes in an all round development of man (Gustafsson 1987). There is a stress on productive labour and on polytechnical education. They argue that theory and practice are inseparable which implies that the two work hand in glove. A theory learnt in schools is reinforced by actual practice in work places. It is believed the combination of both the intellectual and the physical development through productive work would produce citizens with an awareness of the dignity of labour in a changing industrial world. For a deeper discussion see Holmes (1965, 1979) and Nicholas (1983)

Other authors may have different opinions about vocationalization, but it seems the majority contend that it is skill training which is relevant to the world of work.

It is argued in the international literature that unemployment is becoming a problem world-wide. However, its effects are said to be more severely felt in the developing nations. There are several reasons for the high unemployment rate of school leavers in developing countries. Firstly, industries are either closed or are static with no expansion taking place. Secondly, it could be that there are too many school leavers for the modern sector to absorb. Thirdly, it could be that the political instability of third world countries has scared foreign investors who might build up industries that would absorb a lot of manpower. Last but not least, it is argued that pupils leave secondary schools without employable skills.

Vocational education is seen as the main solution to overcome the problem of unemployment. It is believed that this will enable pupils to learn skills useful in employment and in starting income generating projects or small-scale industries if they fail to secure jobs in the modern sector. Tilak (1988, p. 45) states, "Vocational education is believed to be an effective answer to rural problems, to alleviate unemployment, to reorient student attitudes towards rural society, to halt urban migration, to transmit skills and attitudes useful in employment and an important measure of development for youth in rural and urban areas."

In an effort to equip pupils with employable skills in countries like Germany, France and England, business and industry have an important role to play in vocational training. It is argued that in these countries, "Business people wish to see the distance between the world of work and the world of school sharply diminished and to that end they propose changes in the school curriculum, in teacher training and in-service education and the management and structure of the school system." (Noah and Eckstein, 1988, p. 48)

The curriculum in these countries is arranged so that pupils spend periods engaged in various places of employment. It is believed that, together with the educational and vocational orientation which the schools and industrialists provide, the work experience programmes give pupils a knowledge of different fields of employment. Work experience would make it possible for pupils to relate theory more effectively to practice. (National Board of Education Sweden, 1985). It is also hoped that the work experience programmes would help to soften the distinction between intellectual subjects and work and so prepare school leavers for entry into the world of work. (Beeby,1969) The other arguments put forward in favour of work programmes in the international literature contend that, not only would pupils be introduced to the world of machines but pupils would also acquire or develop insights into the productive processes in the industries, trade and marketing regulations, and the values essential for the development of science and technology. Pupils would also learn about Trades Unions and the relationship between the workers and the employers. (National Board of Education Sweden, 1985, Beeby, 1969)

It would seem from the above, that to have an effective vocational education system there should be close communication and cooperation between business and education. Schools alone cannot provide the staff and the machinery required. While it can be argued that the function of education in preparing the young for the world of work is a focus of political debate world-wide, the OECD publication comments that, "What is widely felt and categorically asserted by many employers is that too many young people are leaving school lacking employable skills and having negative attitudes to work" (OECD, 1980 p.79) In other words, the employers blame the schools for being too academic and for not teaching pupils basic skills and for not inculcating a positive attitude to work.

With the above complaints from the employers, developed nations have found it necessary to twin vocational education to industry. In France for example employer groups are involved in the structuring of the curricula and the content of vocational preparation in the schools. Specialists come to give instruction in the vocational schools, and to help define the curricula and examination regulations to teachers and pupils.

Although these schemes in Britain, France and Germany seem to be much admired by other nations, their introduction has been faced with problems. It is alleged that though the Germany dual system of vocational education (apprentice training) finds strong support among the employers, the schools are critical of it. In France and England on-the job-training faces opposition from some of the school boards representatives. Although reasons for the problems are not clearly spelt out, it could be that schools resent employers

interfering too much in their own affairs. Schools feel they have little control which used not to be the case. There is bound to be some friction and disagreement. It could also be that employers tend to have more time with the students than the schools, which might threaten the existence of the school.

The interest shown by employers to absorb school pupils for apprentice training could be viewed from a different perspective. First, any industry is out to make a profit. Absorbing a lot of apprentices could boost production. Since the pupils are not entitled to a salary as workers are, but should only benefit from the work experince it could be argued that the employer benefits. Secondly the taxes the industry should pay to the government may be reduced since they offer services to the nation by training its future workforce. These reasons, though they are only assumptions, could be the reason why employers accept responsibility of providing a national systematic approach to preparing young people for the world of work. (see Noah and Eckstein, 1988)

The Zimbabwe Government is working towards vocationalizing technical subjects. The reasons for vocationalizing technical subjects could be the same as those discussed earlier. Of the five possible ways of securing this type of training suggested earlier by ORYSHKEWYCH, (1982) it is important to find out which method has been adopted and how successful it is.

This type of education (vocational) is very expensive to run. Gallart (1988, p. 216 writes, "The problem of costs must be taken into account as vocational education is more costly than traditional academic education. Laboratories and shops, if they are to be useful are more expensive than black boards and chalk." Other research literature also contend that vocationalization calls for huge sums of money to be used in purchasing of machinery, putting up workshops, buying tools, equipment, materials, maintenance and repair work and other consumables. (see Thompson 1981, Blaug 1973, Lillis et al. 1985. Bray et al. 1986 and Abramson 1979).

It is acknowledged in the international literature that vocational education involves a lot of changes in the school system. For example teachers to man the vocational schools ought to be well trained and at the same time should have industrial experience. It has been found that teachers possessing such skills and experience are scarce. (see for example Lillis et al. 1985, Bacchus1988, Foster 1966, Thompson 1981 and Aleong 1988.) To solve such a problem would mean conducting in-service courses to acquaint teachers with the world of industry and so enable them to update their skills. This would also qualify them to teach in vocational schools. This remedy however has its own effects. Bray et al (1986, p. 173) comments, "Two problems with in-service teacher training are, firstly as teachers improve their qualifications they become eligible for higher salaries and unit cost therefore rise and secondly in-service often qualifies the recipients (teachers) to leave the profession and take jobs

elsewhere." The likely places could be the industrial sector where salaries are said to be healthier (higher) as compared to the teaching profession. The flight of teachers from the schools to industry in search of greener pastures also adds to finance and other resource constraints as far as the implementation of vocational education is concerned.

Confronted with a situation where teachers with relevant skills are scarce, developing nations that have embarked on vocational training programmes tend to rely on outside help. In this case expatriate teachers. It is argued that greater expense is incurred through hiring expatriate teachers than through the use of locally trained staff. (see Bray et al, 1986 and Foster, 1966.)

Apart from great cost, it is also alleged that vocational subjects require support systems external to the school to supply materials and help repair equipment. However, experience elsewhere has shown that it is difficult to develop such support systems even when a small number of schools is involved. (see Lillis et al, 1985).
In an attempt to understand more about vocationalizing technical subjects, the intention here is to find out about the goals, implementation strategies taken to facilitate change, and the possible constraints hindering the success of this programme in the pilot schools. The solutions taken to overcome the constraints are also of particular importance to this study.

2.2 Goal

The term goal for instance has been widely used in educational circles throughout the World. Any new innovation in the education system involves prior reflection of the goals which are to be met. Hummel (1977) acknowledges that the concept of goal implies that man aims towards a future which he hopes will be a better one. Goals and objectives of education are emanations of value systems and norms. In other cultural contexts, the goals of education could be explicit when it comes to religious beliefs, philosophies and political ideologies. In such instances, goals correspond to the aspirations of those in power and in control of the society. However, not all goals are explicit. Some goals are implicit. Hummel states explicit goals as those expressed in constitutions, laws, official texts and declarations, and those in political manifestos. The study shall focus on explicit goals set and written down by the government and how different groups understand them.

2.3 Obstacles

Obstacles, like goal, is a term that has been used whenever Implementation of new programmes or innovations in education for instance take place. The term has been used by researchers who write and evaluate educational programmes. Obstacles would be shortage of skilled manpower to implement

the programmes, lack of funds to buy equipment, books and materials. In this study the term shall be used to refer to all forms of hindrance or obstructions encountered in the implementation process of vocational education in the schools.

2.4 Change

The term change is a central word used in this study. Ellström (1984) and Havelock (1973) point out that change is any significant alteration in the status quo which is intended to benefit the people involved, in this case students. Terms like; transition, development, innovation, renewal, reform and so on may refer to change. Individual persons or organizations may also have different interpretations. In schools for example, teachers may view change differently from the way those at a higher organizational level define the word. It is therefore important in this study to focus on the term change on both levels, that is, at individual (teachers) level, and at organizational levels.

Neale et al (1981) writes that change agents could be internal or external consultants whose roles are usually to work as, (a) researchers, (b) trainers (c) or facilitators of change. As researchers, they should find out new knowledge, plan and develop strategies suitable for change. The primary role of this group is to provide decision-makers with a lot of useful and timely information about how the change could take place.

In the position of trainers, they should educate people about the change in schools or in other organizations. The trainer could be someone hired specifically for the job or somebody with the requisite knowledge from within the school organization. He may be a subject-matter specialist who conducts specific training activities which may differ from those carried by the facilitator.

The facilitator helps with ideas and directions on how to implement change. He can be an internal member of the organization or somebody brought in from outside. On the whole, he should be versed in matters concerning organizational development in order to guide the people properly and with confidence. The roles discussed above can be carried out on individual basis or in cooperate groups.

2.5 Implementation

The term implementation is a central word because the focus of the study was to find how the pilot schools were coping with vocational education. Many authors, for example Hawes (1979) have written about the complications that are involved in implementing curriculum changes in schools. However, the review of implementation studies carried out by Fullan and Pomfet (1981 p. 60) have been found most suitable for this research. The term implementation shall be used here as they used it in their review. They emphasize the following factors as important for successful implementation in the local school;

(1)-- "Any proposed change must be clearly understood by users in the local school. The reasons for making changes and the precise nature of the changes must both be understood. Innovations that are particularly complex may present special problems in this regard.
(2)--Successful implementation usually depends upon intensive in-service training that is specifically directed to the changes being introduced.
(3)--School personnel need adequate time, materials and facilities during implementation. Making curriculum changes is an orduous specialised activity above and beyond normal routines.
(4)--Continuous feed back on implementation efforts is also desirable. This feed back between managers or consultants and local school personnel is important, so as feed back among peers at the local level.
(5)-- The extent to which an innovation meets local needs as perceived by school personnel, is related to successful implementation." From what has been said above, it is obvious that the term implementation has a lot of critical parts and these are going to be studied in this research.

2.5.1 The organizational theory and planned change

According to Ellström, (1984, p.53) "The notion of an organizational model refers to a set of assumptions or a research orientation, concerning organizational reality." In other words, when planning for change in any organizational setting for example in a school, theories are said to have a great influence in the way we think about this change. These theories or models fall under four groups. These are, the rationalistic, the political (non-rationalistic) the social and the anarchistic model. (Ellström, 1984.) All these models of organizational change pre-suppose certain assumptions concerning organizational phenomena and processes. They also have different implications for the planning and implementation of organizational change. See typology for details.

2.5.1.1 The social interventionist model (SI)

This is defined as a theoretical complex comprising the rationalistic model and the social system model as its elements. The SI-model as it is sometimes called represents a complex of theoretical assumptions that underly most existing normative models of problem solving and planned organizational change. Ellström (1984, p. 61) writes "The conception of planned change underlying the social interventionist model may be characterized by at least the following five assumptions: (a) the idea of the primacy and pre-existence of purposes, goals, and intents as a basis for the interpretation, explanation, and evaluation of human behaviour.(b) the phase-theory conception of problem solving and change, that is, the idea that these process can be understood as a more or less sequential series of phases, (c) the analytic-rational conception of problem solving, (d) the emphasis placed on the important role of the change agent as a manager of the process of planned change, and (e) the emphasis on internal factors as the primary targets of change."

Different authors contend that the aim of this model is to lay emphasis on the creation of problem awareness when bringing in new changes. It is also stressed that in this model there is a sequential relationship between different phases in the sense that the carrying through of each phase is dependent on the outcome of the previous phase.

2.5.1.2 The political interactive model (PI)

This is defined as a theoretical complex comprising the political model and the anarchistic model as its elements. The PI-model unlike SI-model is assumed to put emphasis on the external factors as the primary targets of change. This model has no set purposes, intentions or goals. It is alleged this model seem to place emphasis on acting before any planning is done. The model works on trial and error basis. The table below by Ellström summarises the four organizational models.

A Typology of Four Organizational Models.

	(a) Organizational Goals and Preferences: Clear and shared (consensus)	(a) Organizational Goals and Preferences: Unclear and /or disagreed upon (conflict)
(b) Organizational Processes/ Technology: Transparent/ Clear	The Rational Model Keywords: Truth, Thinking, Task-orientation	The Political Model Keywords: Power, Conflict, Struggle
(b) Organizational Processes/ Technology: Ambiguous/ Unclear	The Social System Model Keywords: Trust, Learning, Collaboration	The Anarchistic Model Keywords: Foolishness, Randomness, Play

Source: Abstract, Ellström, 1983, p.237

2.6 Research objectives

In view of the discussion that has been going on, that of trying to understand about the implementation strategies that were adopted to start vocational education in pilot secondary schools, the research objectives are as follows;
1--To find the goals of vocationalizing technical subjects.
2--To find out the implementation strategies and the possible obstacles (constraints) met at central, regional and local school levels.
3-- To find the criteria used in selecting the pilot schools.

3. RESEARCH METHODOLOGY

All the thirteen schools in the country selected to pilot vocational education were used as the base for this investigation. Questionnaires, documents from the Ministry of Education and interviews were used as instruments. Only three were chosen as case schools because the intention was to probe deeply into implementation. The subjects in the case schools were interviewed because the interview sheets covered more questions than the questionnaires. A case study was found appropriate because one aspect of a problem can be studied in some depth in a limited time. See for instance, Bell (1987), Best (1981), Bramble and Mason (1978), Nisbet and Entwistle (1970). The study is more a total study with an intensified case based on fact finding. This meant that the state of the workshops, machinery and the tools for example could be studied. (Kerlinger 1964)

Before the production of the final questionnaires and the structured interview sheets, a trial run was done using fellow college students. This was the only possibility since the preparation took place outside Zimbabwe. These colleagues were to represent different target groups.

After the trial run of the questionnaires and the interview sheets, some changes in the wording were made to make the items easier to understand.

The face validity of both questionnaires and interview sheets was judged as adequate. No further advanced validity or reliability study was done. All samples of questionnaires and the interview sheets used are in the appendix.

Education Officers, Task Force officials and Curriculum Development Unit officials (CDU) were chosen as target groups because all have important roles to play. They are responsible for standards control and inspections, educational planning, curriculum development and writing. These officials together with three headmasters and all the sixteen teachers in the three case schools were interviewed.

Questionnaires were administered to all teachers and headmasters of the other ten pilot schools. The purpose was to find out why their schools had been chosen to pilot the programme and to what extent the teachers and the headmasters knew about the aims and objectives of vocational education.

Pupils were left out of this study because the topic under investigation was concerned with the planning and implementation strategies where pupils are rarely consulted.

Two case schools were chosen in one region because they were near to each other and easy to get to. The third school chosen in another region had

unfortunately not started vocational education. It was therefore impossible to consider this school as a case. However, questionnaires were administered to technical subject teachers to find out how well informed they were about vocational education due to have been started in their school in September 1988.

Another school in the same region was therefore taken as a case school. The school was picked because it has a long history of teaching woodwork, It was established in the 1960' when F2 secondary schools were introduced. The F2 schools emphasized the teaching of practical subjects until the early 1980' when they were phased out.

The schools were visited in the order "A" to "H" beginning from region one to region three. Suitable dates for interviews were agreed and the number of technical subject teachers in each school was noted.

In the pilot schools which were not chosen as case schools, meetings were held with some headmasters and technical subject teachers to explain how the questionnaire should be completed. Each school was given one questionnaire for each technical subject teacher. The schools needed four days to complete the exercise since all were busy with examinations at the time of the investigation. The completed questionnaires were handed in to the headmasters' office and collected from there on the dates arranged.

Sealed envelopes containing the completed questionnaires were opened in the presence of the headmasters. This was done to check that every questionnaire was properly completed and, at the same time, to verify the number of questionnaires enclosed. In the schools coded D, E, F, G, H and I questionnaire returns were one hundred percent.

Questionnaires were sent by post to the pilot schools too far away to be reached in good time before schools closed. Accompanying letters stated the purpose of the exercise and gave instructions for completing the questionnaires. (see appendix section) It was explained that privacy and confidentiality were safeguarded and questionnaires had been coded for follow-up purposes only. The respondents were also assured that the Ministry of Education had granted approval. Stamped addressed envelopes were enclosed.

Two schools did not return questionnaires because the questionnaires arrived after they had closed.

In the three case schools coded A, B and C teacher interviews took approximately 35 minutes each. The headmasters and heads of technical department took longer. They had a lot of information about vocational

education since both had been called to a seminar organized by Curriculum Development Unit (CDU) about implementing the programme (Vocational education) in pilot schools. Three days were spent in each of the case schools doing interviews with technical subject teachers and compiling check-lists of machines and tools.

The second group of subjects interviewed were officials. This included the Central Task Force officials, Curriculum Development Unit officials, Education Officers Technical Subjects, Regional Task Force officials and, lastly, Education Officers Planning division. This exercise took a full week to complete.

Of the estimated sample population of eighty (80) subjects, the total number of respondents who answered questionnaires or were interviewed was seventy three. This number is broken down as follows, 47 teachers, 10 headmasters, 3 Central Task Force, 3 E. O. Technical Subjects, 3 CDU officials, 3 E. O. Planning division and 4 E.O. Regional Task Force members. When all questionnaires and interview sheets were collected an analysis was made. Summary sheets were prepared for all the interview and questionnaire responses. This made the coding of the responses easy. The responses were catergorised. Firstly this was done on individual groups (subjects) that took part in the exercise. This was because the questionnaires and the interview sheets did not have the same questions right through for the different categories. The questions asked depended on the position the different subjects held in the ministry. Certain responses to the interview sheets and questionnaires were combined to provide a basis for discussion.

4. DESCRIPTION OF ANSWERS

This section presents answers from interviews and questionnaires. All the answers were analysed in the order in which they appeared in the interview sheets or questionnaires. In the presentation, answers supplied by different groups of respondents were treated separately. For example, answers supplied by teacher questionnaires and interview sheets were analysed separately from those supplied by headmasters, Education Officers etc. Certain questions in this section have appeared more than twice in different interview and questionnaire sheets. The questions in the interview sheets answered by Regional Task Force and Education Officers Technical Subjects are the same right through. As a result of the separate treatment given to different sets of interview and questionnaire sheets they sound repetitive and in some cases have given similiar answers. See appendix for details.

4.1 Teacher questionnaires and interviews

In all, 47 teachers participated in this exercise. Sixteen teachers were interviewed and thirty one teachers answered questionnaires. Most of the questions in the interview and the questionnaire sheets were similar. There were, however minor differences in the wording of certain items and the numbering. A few questions found in the interview sheets did not appear in the questionnaire sheets. The purpose was to minimize the length of the questionnaire as far as possible since it was assumed respondents would not enjoy too much writing because of pressure from examinations.

The first question found in both questionnaires and interviews was the length of time the teachers who took part in this exercise had taught in the pilot schools. The answers ranged from one year to twenty nine years. The majority were found to have taught in these schools for only one year. The second largest group had taught for a period of two years. The least number of teachers had taught in the pilot schools from seven years onwards.

In answer to the question "Did you have any other form of employment before joining teaching?" nineteen said yes and twenty eight answered no. A tie occurred for two job categories namely, temporary teaching and those who worked as carpenters. Out of the forty seven teachers, seven had served five years apprentice in trades like carpentry, building and motor mechanics. This is a small proportion of teachers who can be said to have experience work closely related to their teaching subject.

The teachers interviewed, were asked if they had five years of training, four years of training or three years. The majority had trained for three years. Next in order, were those who took four years to train. The Ministry of

Education recommends a five year apprentice training for teachers of vocational education. This is necessitated by the nature of the course syllabii which requires background knowledge in carpentry and joinery.

The question "What does vocational education mean to you?" was answered by sixteen teachers. While fifteen teachers stated that it was about skill training, one defined it as teaching of practical subjects. Two answers were supplied to the question of what vocational education involves. Out of the sixteen, nine stated that vocational education involves the use of tools to produce articles and seven indicated that it involves the use of machinery and hand tools to learn different trades in preparation for employment.

The aims and objectives of vocational education as stated by the teachers are; (a) to create self employment opportunities for school leavers, (b) to provide skilled manpower in the country, and (c) to equip school leavers with employable skills. The respondents acknowledged that this education should reduce unemployment and the need for expatriate staff. Of the sixteen teachers interviewed, seven indicated self employment as the most important aim. The other seven believed that the provision of employable skills was most important while two thought skilled manpower was the most important.

Questions on the importance of vocational education aims were asked in both questionnaires and interviews. Of the forty seven teachers, thirty two indicated self employment as the most important aim. Fourteen believed providing skilled manpower was the most important, while one mentioned the giving of status to technical subjects as the most important aim.

The teachers had different views on the question of fulfilling all the aims and objectives of vocational education in the syllabii. While thirty two indicated that it was impossible to fulfill all the aims because of lack of time, materials, and books, fifteen saw it as possible.

An interesting feature in this study was to find out if girls were allowed to enrol in this vocational education. Whilst thirty six teachers acknowledged that girls could enrol, eleven said that girls were not allowed to enrol in the programme.

The question was further extended to find out if girls were interested to take the programme or not. Out of thirty one teachers who answered the question, fourteen indicated that most girls like to join the programme with seventeen opponents indicating that girls do not like to join. The reasons given for not joining were that girls lack encouragement, and anyway most of the schools visited were boys high schools. These did not enrol girls.

The question "What do you think the school can win or lose by participating in this programme?" had three different categories of answers. Out of sixteen teachers, seven indicated that they did not know, while seven acknowledged that the schools may benefit from self reliance in the form of repair work. Two believed that the schools may gain status which may result in more pupils enrolling in the school.

A similar question which required respondents to indicate groups that may win or lose in this programme showed that the students taking the course may win in every respect. The areas of benefits were listed as those of employment opportunities and further training.

The introduction of vocational education has encouraged schools to become self reliant in repair of broken furniture and other construction work.
All the teachers contend that the planning of vocational education was all done by the government.

A maximum number of sixteen pupils per school were allowed to enrol for the course. This was the policy as directed by the Ministry of Education. The number was not constant in all the schools.

While fifteen teachers indicated that they were motivated with the programme, one stated that he was not.

There were differences in the comments made about the programme. Whilst thirty five indicated that the programme was good, five described the programme as an ambitious venture. Four believed it was challenging and three said the programme was bad.

While forty teachers showed great dissatisfaction with the planning of the whole programme seven indicated that it was good.

There were some uncertainties when it came to the teaching methods to be adopted. Twenty seven indicated that they teach in a different way than before and twenty said they use the same methods.

Pupils taking this vocational education start at form 3. This was stated to be a ministry policy.

All the interviewed teachers indicated the need for involving other specialists from industry as teachers in this programme.
Whilst forty four teachers contend that there is some training required to enable teachers to teach vocational education, three objected to the idea.

Three different answers given by the teachers in response to the need for in-service training were; (a) to give industrial exposure (experience) to the teachers, (b) to familiarize teachers with the new vocational syllabus and (c) to update teacher's skills and knowledge. Of the forty seven teachers, eighteen believed giving teachers some industrial exposure was most important. Seventeen indicated that updating teachers skills was most important while twelve thought familiarizing teachers with the new syllabii was the most important.

On the question of the training programme, thirty six teachers indicated that they could foresee problems encountered while eleven denied of any problem. The problems indicated were that in-service training of teachers was already overdue. This was because vocational education had already started in the schools whereas the in-service training of teachers had not.

4.2 Headmasters' questionnaires and interviews

All answers in this section were provided by the headmasters.
Some of the questions in the interview sheets and the questionnaires answered by headmasters were different. However, each question has been analysed. The background information appeared on the interview sheets but did not appear on the questionnaires. See appendix D 1 (4) and E 1 (2).

The case schools have between 15 and 20 years experience of teaching technical subjects.

The teaching of practical subjects are said to have not been of much help to school leavers in terms of employment opportunities or in enabling them to pursue further studies in the past. It was felt however that these subjects have greatly improved of late.

The headmasters indicated that the local community were very positive to the teaching of these subjects in the schools.

Vocational education has been defined as skill training.

There were both positive and negative answers on fulfilling the aims. Out of ten headmasters, five indicated that it was possible to fulfill all the aims while the other five believed that it was not. The obstacles stated were, lack of equipment, books and qualified teachers.

Eight headmasters agreed that girls were free to join the programme and two said they were not. The question was further asked to find if girls may chose to join the programme. Of the seven headmasters who answered the question five believed that if encouraged girls can join and two said girls are not interested in the programme. The reasons for not joining the programme were stated as

lack of motivation and that girls preferred home economics to wood work, metal work and building.

The question "What do you think the school can win or lose by participating in this programme?" had four choices of answers. These were: (1) school gains status (prestige), (2) raises money through sale of projects, (3) school enrolment increases and lastly (4) don't know. Five headmasters indicated that they did not know what the schools could win or lose, two believed that school enrolment may increase, one indicated that the school may gain status while two thought the school may raise money through sale of projects made in the school.

While there was an indication by two headmasters that the aims and objectives of vocational education were known only to technical subject teachers, one mentioned that the aims were known to all the teachers in his school. This question was administered only to headmasters in the three case schools.

The three headmasters of the case schools acknowledged that the programme is intended to benefit both the students, the government and the employers.

The need fulfilled by this education in the schools is mainly self- reliance in form of repair work and the construction of small roof trusses and shuttering.

The headmasters acknowledged that the planning of this programme was done by the Ministry of Education.

While seven headmasters indicated that they were motivated by the programme, three declared that they were not.

There has not been any in-service teacher training with regards to this new programme. Seminars were conducted. These were done to familiarize teachers with the new syllabii and also to familiarize teachers with industrial safety.

Thorough in-service training of teachers was promised to start early in 1989. All the headmasters indicated that there was really need for this in-service training programme.

4.3 National task force

The national task force group is formed of members from the Curriculum Development Unit, a few college lecturers, officials from the Ministry of Higher Education and from the Ministry of Primary and Secondary Education.

Three Task Force officials were interviewed. These acknowledged that selection of people with knowledge in technical education was done by the Permanent Secretary in the Ministry of Higher Education.

The officials interviewed confirmed that pilot schools were chosen from schools with good workshop facilities. This included machinery in the workshops as well as other tools. The other criteria was teachers possessing the relevant qualifications. This combination it was hoped would speed up the implementation of the scheme.

While two officials indicated that more schools will join in the programme in the near future one answered that all schools may join the programme.

The officials intend twinning this programme to industry. The problem is that the industries are not willing to twin the programme. Industrialists have been very influential in compiling the syllabi.

While two officials think that pilot schools may be used as vocational information centres in future, one said the schools may be treated as any other ordinary schools ie educating pupils.

4.4 Regional task force

Answers in this section were provided by the Regional task force.

Four officials were interviewed. They defined vocational education as skill training. It is important to provide enough skilled manpower and to create self employment.

The aims and objectives of this vocational education are;(a) to provide pupils with self employment skills, (b) to provide enough skilled manpower and (c) to provide pupils with employable skills.

This education aims to reduce unemployment by equipping pupils with employable skills.

The four officials were convinced that it was impossible to fulfill all the aims set for the programme.

The government has initiated this programme of vocational education.

Girls are free to enrol in the programme, if they so wish.

The officials see no negative effects from this vocational education.

All schools will participate in this programme in future.

While three officials acknowledged that there was little control in the running affairs of the pilot schools by the government, one said that the government does not control these schools.

The Regional Task Force and Technical Subjects Education Officers are change agents helping the schools to implementing vocational education.

Of the four officials, two indicated that the headmasters and teachers in the pilot schools were motivated by the programme while one thought slightly motivated and one said not motivated.

The question "What do you think the school can gain or lose by participating in this programme?" had three different answers. While two officials believed that all schools involved in the programme may gain, one answered that only a few do win. The fourth official believed that some individual schools were going to lose.

Two types of syllabi., the ZNCC and Cambridge will be used in schools offering vocational education.

The syllabii has been compiled by the Polytechnic Colleges in conjuction with the Ministry of Higher Education.

There are some differences between the Ordinary Cambridge Woodwork syllabus used in other secondary schools and the Zimbabwe National Craft Certificate (ZNCC) syllabus used in pilot schools. The Zimbabwe National Craft Certificate stresses carpentry and joinery. This is more to do with construction work like roof truss construction, the making of doors, wooden floors, concrete forms and many things related to building. The Ordinary Cambridge Woodwork syllabus emphasizes cabinet making and joinery. This is furniture making for example, tables, chairs, chests of drawers and so on.

All the officials agree that teachers will teach in a different way in this programme than they used to.

The need for involving other specialists in the teaching of this new vocational education in schools is very much appreciated.

The time allocation for this programme is fourteen periods per week.

Pupils study for the ZNCC at form three level.

An evaluation of the programme is being planned.

All the officials contend that there is some form of training given to teachers who will work in this vocational programme. The purpose of this training is to upgrade the level of the teachers. The in-service training is planned by the Ministry of Higher Education and the Ministry of Primary and Secondary Education. It will start early in 1989.

Thorough in-service training of teachers has not yet started. Only workshop seminars have been held.

The purpose of the in-service training is to upgrade teachers in order to have enough skilled manpower.

4.5 Curriculum development unit

Answers in this section were all supplied by Curriculum development unit officials.

Three officials were interviewed. The two syllabi used in schools offering vocational education are the Zimbabwe National Craft Certificate (ZNCC) and the Cambridge.

There are some differences between the two syllabi .

The considerations that were taken into account in planning the aims and objectives of vocational education are; (a) creation of self employment opportunities and (b) giving pupils some employable skills.

The time allocation for this programme is fourteen periods per week.

The Curriculum Development Unit officials (CDU) believe that not all the aims and objectives may be met in the schools.

There was need to consult other people with knowledge in vocational education in compiling the syllabi..

There is an evaluation planned for the new syllabus.

4.6 Education officers technical subjects

Answers in this section were provided by Education officers technical subjects.

Three Education Officers responsible for Technical Subjects were interviewed. They defined vocational education as skill training.

It is important to the country because it provides pupils with skills relevant to self employment.

The aims of vocational education are to provide skills that are relevant to self employment and to provide enough skilled manpower in the country.

The aim is to reduce the rate of unemployment in the country by providing pupils with relevant skills.

It is impossible to fulfill all the aims set for this programme.

The government and people have initiated this programme to be carried out in the schools.

There is no sex discrimination in the schools so girls can enrol in the programme.

Two Education Officers believe there will be bad effects if the programme trains more skilled people who can not all be absorbed in work places and one sees no effects.

The three agree that all schools may participate in this vocational education in the future.

Two Education Officers indicated that there was no government control in the running affairs of the pilot schools while one person believes that there is some control from the government.

The Education Officers are the change agents helping the schools to implementing this programme.

All Education Officers had different opinions when asked about the motivation of teachers and headmasters with regards to this programme. One indicated that the headmasters were motivated. One stated they were slightly motivated and one pointed out that they were not motivated.

All Education Officers believe that all pupils involved in the programme may gain.

Only technical subject teachers with the requisite qualifications are going to be involved in the programme.

Two syllabi , the Zimbabwe National Craft Certificate (ZNCC) and the Cambridge are used in schools offering vocational education.

The (ZNCC) syllabi was compiled by the Ministry of Higher Education former Ministry of Labour and Manpower Services.

There are some differences between the Zimbabwe National Craft Certificate syllabii used in schools offering vocational education and the Ordinary Cambridge syllabii used in most schools offering woodwork.

It is stated that teachers may adopt new teaching methods in this vocational programme.

The time allocation for this programme is fourteen periods per week.

Pupils enrol for this programme in form three.

There is an evaluation planned for this new syllabi being used in pilot schools. There is some training required by the teachers to enable them to teach in vocational schools. The purpose of the training is to update teacher's skills and knowledge.

Thorough in-service training of teachers has not yet started. It will start early 1989. Workshop seminars were held with the subject teachers to familiarize them with the new syllabus. The in-service training is aimed to upgrade teachers' skills.

4.7 Education officers planning

Answers in this section were provided by Education Officers planning.
Three Education Officers responsible for planning were interviewed. They said vocational education is about skill training.

Its importance lies in the provision of skills for self employment and the provision of skilled manpower.

The aims and objectives of this vocational education are to provide students with self employment skills.

This is aimed to reduce unemployment by equipping pupils with skills which they may use in life after school.

Not all aims may be fulfilled in a short period of time.

This education (vocational) has emanated from the government and people.

Girls may enrol in this vocational education if they so wish.

Two of the Education Officers believe there may be negative effects from this vocational education and one sees no bad effects with this vocational education.

It is acknowledged that all schools may participate in this vocational education in the near future.

The Education Officers state that the implementation strategy used was rational. They stated that after the pilot schools were identified, schools were given options to introduce the programme.

There is no government control in the pilot schools.

All said they believed in an analytic rational process of planning.

They all agree that they are change agents helping the schools in implementing vocational education.

While two officials believed that headmasters and teachers were motivated with the programme, one felt that not all were motivated.

The three believed that all students involved in the programme would win.

Not all teachers are going to be involved in this vocational education.

There is some form of training required by the teachers as far as implementing this programme is concerned. The training is done to update teachers skills and knowledge. This is being planned by the Ministry of Higher Education and the Ministry of Primary and Secondary Education. The programme has not started as yet but workshop seminars have been held.

The purpose of in-service training is to overcome the problems of skilled manpower. The teachers will be upgraded by attending these in-service courses.

4.8 Summary of answers

Vocational education was defined as skill training. The aims and objectives of vocational education were to equip pupils with skills for self employment, to provide enough skilled manpower and to provide "employable skills" relevant to the world of work. The answers varied from one individual to the other.

Most teachers and headmasters indicated that they were motivated with the new programme. They stated that the implementation problems were mainly due to lack of adequate materials, equipment, books and manpower.

There were differences in the way people thought about the possibility of fulfilling all the aims and objectives of vocational education.

All the teachers, headmasters and Education Officers stated that there was no in-service training of teachers in preparation for the programme. Workshop seminars were conducted to familiarize teachers with the new syllabi of

vocational education that is, the Zimbabwe National Craft Certificate (ZNCC). In-service training of teachers should start in early January 1989.

The headmasters and the Central Task Force officials stated that the schools were chosen on the basis of good equipment in the workshops and the presence of a teacher with the requisite qualifications.

5. PRESENTATION AND ANALYSIS OF DATA

5.1 Analysis of objective 1

This part of the analysis is concerned with the first objective which is to find the goals (aims and objectives) of introducing vocational education in secondary schools. The subjects concerned with this objective were teachers and headmasters of pilot schools, Education Officers responsible for technical subjects and those responsible for buildings under plann. ing division, CDU officials, and lastly the Central and Regional Task Force officials.

Not all group subjects mentioned above were asked every question. This was a result of the type of instruments used. More questions concerning this objective were found on the interview sheets than on the questionnaires. The data presented in this section applies where at least two or more groups have answered the same question in questionnaires or interview sheets. Answers to questions that applied to only one group of respondents can be found in section 4 .1- 4 .7 and in the appendix.

The first question was to find out what vocational education is about. This was answered by twenty nine subjects as follows; three headmasters of the case schools, three E.O. Technical Subjects, three E.O. Planning division, four Regional Task Force officials and sixteen technical subject teachers. All the sixteen teachers were from the three case schools. These were all interviewed. Out of the twenty nine subjects, twenty eight indicated that vocational education was about skill training. One respondent defined it as the teaching of technical subjects.

There were three categories of answers to the second question which was about the aims and objectives of vocational education.

The three categories were (1) to provide students with self employment skills, (2) to provide students with employable skills and (3) to provide skilled manpower. Table 1 shows the aims of vocational education as given by the subjects.

Table 1 - Aims of vocational education

GROUPS OF RESPONDENTS	AIMS		
	SELF EMPLOYMENT	EMPLOYABLE SKILLS	SKILLED MANPOWER
TEACHERS	7	7	2
HEADMASTERS	1	0	2
E. O. TECHNICAL	2	0	1
E. O. PLANNING	3	0	0
REG. TASK FORCE	1	2	1
TOTALS	14	9	6
N = 29			

Of the twenty nine subjects, fourteen believed that the provision of self employment skills was most important. Nine people believed that providing students with employable skills was most important, while only six answered that skilled manpower was most important.

There were four different categories of answers on the importance of the aims and objectives of vocational education. These were; to provide students with self employment skills, to provide skilled manpower, to provide students with " employable skills" and to improve the status of technical subjects. Table 2 shows the importance of the aims of vocational education.

Table 2 - Importance of aims.

GROUPS OF RESPONDENTS	AIMS			
	SELF EMPLOYMENT	SKILLED MANPOWER	EMPLOYABLE SKILLS	IMPROVE STATUS
TEACHERS	32	14	0	1
HEADMASTERS	2	2	6	0
E. O. TECHNICAL	3	0	0	0
E. O. PLANNING	1	2	0	0
REG. TASK FORCE	3	1	0	0
TOTALS	41	19	6	1
NUMBER= 67				

Of the four categories, forty one people believed that self employment was most important. Nineteen believed that skilled manpower was most important. There is only one group of respondents answering different from the others. It was six headmasters who answered that providing students with "employable skills" was most important. Only one teacher answered that improving the status of technical subjects was the most important.

The question about the possibility of fulfilling all the aims had more negative responses than positive ones. Of the sixty seven respondents, forty eight believed that it was impossible to fulfill all the aims and objectives while nineteen saw it as possible.
See table 3 for the responses.

Table 3 - The possibility of fulfilling aims

GROUPS OF RESPONDENTS	POSSIBILITY	
	YES	NO
TEACHERS	14	33
HEADMASTERS	5	5
E. O. TECHNICAL	0	3
E. O. PLANNING	0	3
REG. TASK FORCE	0	4
TOTALS	19	48
NUMBER = 67		

While nineteen people indicated that it was possible to fulfill all the aims forty eight thought it was not. Among those who objected were Education Officers responsible for technical subjects, those responsible for planning and the Regional Task Force officials. It was only some teachers and headmasters who fully believed in the possibility of reaching the aims of vocationalizing secondary education.

Another question similar to that of importance of vocational education, answered previously, is why these aims should be stressed? Only Education Officers and the Regional Task Force were asked this question. Of the ten, nine believed that the main purpose was to reduce unemployment. One indicated that the main purpose was to provide students with employable skills.

Fifty four answered positively to the question of enrolling girls in the programme and thirteen disapproved. This question was answered by all the teachers, headmasters, all Education Officers and the Regional Task Force officials. All the Education Officers believe in the possibility while eleven teachers and two headmasters were hesitant. See table 4 below.

Table 4 - Enrolment of girls in the Programme

GROUPS OF RESPONDENTS	ENROLMENT	
	YES	NO
TEACHERS	36	11
HEADMASTERS	8	2
E. O. TECHNICAL	3	0
E. O. PLANNING	3	0
REG. TASK FORCE	4	0
TOTALS	54	13
NUMBER = 67		

Closely linked to this question was "If yes, do you think they will do that?" This question and the next were administered to headmasters and teachers who answered questionnaires. Of the thirty eight asked, nineteen thought they would enrol, while the other nineteen thought they would not. See table 5 for the responses.

Table 5 - Girls willingness to enrol?

GROUPS OF RESPONDENTS	ENROLMENT	
	YES	NO
TEACHERS	14	17
HEADMASTERS	5	2
TOTALS	19	19
NUMBER = 38		

Whilst a higher proportion of teachers argue that girls will not enrol in the programme, many headmasters agreed that it was possible for girls to enrol.

The question why did they not enrol had three categories of answers. These were; (1) lack of encouragement (2) lack of motivation and (3) the school enrols boys only. Of the thirty four subjects, seventeen believed that girls lack encouragement. Eleven people indicated that girls lack motivation for doing wood work and building. Six pointed out that their schools did not enrol girls.

Of the thirty eight subjects, thirty four answered this question. The four who did not answer had previously indicated that girls were allowed to enrol in the programme.

There were positive and negative responses to the question of negative effects with regards to this vocational education. The question was directed to Education Officers and the Regional Task Force officials. Of the ten, seven indicated that they were no bad effects while three believed there could be some effects. The different responses can be seen on table 6.

Table 6 - Negative side effects

GROUPS OF RESPONDENTS	EFFECTS	
	YES	NO
E. O. TECHNICAL	1	2
E. O.PLANNING	2	1
REG. TASK FORCE	0	4
TOTALS	3	7
NUMBER =10		

The Regional Task Force was composed of an assortment of education officers. These included science, mathematics, agriculture and home economics. The two groups of Education Officers i.e. Technical and Planning were familiar to problems faced in schools offering technical education. Probably this may have influenced their way of answering the question on side effects.

The last question was about the number of schools that were to participate in the programme in the near future. The group subjects indicated that all schools may join the programme. Two of the respondents had a slightly different answer . These stated that more schools were joining every year.

5.2 Analysis of objective 2

The second objective is about the implementation strategies adopted from the Central to the local level which are the schools. Problems (obstacles) related to implementation of this programme were analysed.

The question " To what extent does the government control and rule the pilot schools?" was answered by Education Officers and the Regional Task Force officials. Of the ten, six indicated that there was no government control and this was mostly Education Officers, Technical Subjects and Planning. Three Regional Task Force officials and one Education Officer stated that there was little control from the government.

All the ten officials mentioned above said that there are change agents helping the schools to implement the programme. These agents are mostly themselves.

The question of motivation had three categories of answers. These were; motivated, slightly motivated and not motivated. Of the thirty six respondents, twenty six said they were motivated. Eight indicated that they were not motivated with the programme while only two declared that they were slightly motivated. See table 7 for responses.

Table 7 - Degrees of motivation among different groups of respondents

GROUPS OF RESPONDENTS	DEGREES OF MOTIVATION		
	MOTIVATED	SLIGHTLY MOTIVATED	NOT MOTIVATED
Teachers	15	0	1
Headmasters	7	0	3
E. O. Technical	1	1	1
E. O. Planning	1	0	2
Reg. Task Force	2	1	1
Totals	26	2	8
Number = 36			

From the table above it appears that a large majority of the people feel motivated with the vocational programme especially the teachers.

The question of winners and losers in the programme was answered by ten people. These were: Regional Task Force officials, Education Officers,

Technical Subjects and Planning. Of the ten, eight indicated that everyone in the programme would gain while the remaining two answered that a few may win and some were going to lose.

The question "What do you think the school can gain or lose by participating in this programme?" had four categories of answers. These were; school enrolment increases, school gains status, school raises money through sale of projects and don't know. Of the twenty six subjects, twelve indicated that they did not know whether the school was going to win or lose. Nine people indicated that the school may raise money through sale of projects. (self reliance) Three stated that the school gains status while two indicated that the school enrolment increases. See table 8 for the responses given.

Table 8 - What School gains?

GROUPS OF RESPONDENTS	WHAT TO GAIN			
	SCHOOL ENROLMENT INCREASES	SCHOOL GAINS STATUS	RAISE MONEY	DONT KNOW
TEACHERS	0	2	7	7
HEADMASTERS	2	1	2	5
TOTALS	2	3	9	12
NUMBER =26				

It may be said there is a great deal of uncertainty.

All Ministry officials interviewed stated that not all teachers would be involved in this programme. Only technical subject teachers with relevant qualifications were eligible to teach in pilot schools.

The question "Do you see this vocational education fullfill any needs in the school or in the local society near the school?" had one answer. Twenty six who answered the question, that is headmasters and teachers, indicated that self reliance was the most important need fulfilled in the school.

Two categories of answers were given to the question "Who planned this education?" Of the sixty seven subjects, sixty one indicated that the government was responsible. Education Officers said that the government and people were involved. See table 9 for the responses.

Table 9 - Who Planned the Programme?

GROUP OF RESPONDENTS	PLANNERS	
	GOVERNMENT	GOVERNMENT AND PEOPLE
TEACHERS	47	0
HEADMASTERS	10	0
E. O. TECHNICAL	0	3
E.O. PLANNING	0	3
REG. TASK FORCE	4	0
TOTAL	61	6
NUMBER =67		

The headmasters and teachers who were interviewed stated that not everyone was doing vocational education. Only a few pupils were selected to do vocational education. They also stated that there were problems of timetabling the programme in the morning. All lessons took place in the afternoons.

The question of teaching methods had positive and negative answers. Of the fifty four subjects who answered this question, thirty four believed that teaching methods may change. Twenty people, all teachers, thought they would not. Table 10 shows the responses.

Table 10 - Will there be changes in teaching methods?

GROUP OF RESPONDENTS	CHANGES IN TEACHING METHODS	
	YES	NO
TEACHERS	27	20
E. O. TECHNICAL	3	0
REG. TASK FORCE	4	0
TOTALS	34	20
NUMBER = 54		

All the teachers, headmasters, and the officials who were interviewed indicated that the time allocation for the programme was fourteen periods of forty minutes each per week.

All the Education Officers, the Regional Task Force officials, and the Curriculum Development Unit officials (CDU) answered that evaluation of the programme is being planned.

The question of in-service training was answered by all Regional Task Force officials, teachers, Education Officers, Planning, and Technical Subjects. Of the fifty seven, fifty four acknowledged the need for in-service training and only three teachers felt there was no need.

The Regional Task Force officials, headmasters, Education Officers, Technical Subjects and Planning acknowledged that no thorough in-service training of teachers had taken place in preparation for the new programme. Workshop seminars were conducted by the Curriculum Development Unit (CDU) to familiarize teachers with the new syllabus. These took two days each.

There were differences among the groups in their view of what in-service training is about. Whilst education officers and the Regional Task Force officials had one view, teachers and headmasters think that in-service training can fulfill more than one aim. Of the sixty seven who answered the question, twenty seven believed updating skills and knowledge was the most important. Twenty three thought giving industrial exposure (experience) was the most important while seventeen believed that familiarizing teachers with the new syllabus (ZNCC) was the most important need. Table 11 shows the responses.

Table 11- Needs fulfilled by in-service

	NEEDS		
GROUPS OF RESPONDENTS	UPDATE TEACHERS' SKILLS & KNOWLEDGE	EXPOSURE TO INDUSTRIES	FAMILIARISATION WITH NEW SYLLABII
TEACHERS	17	18	12
HEADMASTERS	0	5	5
E. O. TECHNICAL	3	0	0
E. O. PLANNING	3	0	0
REG. TASK FORCE	4	0	0
TOTALS	27	23	17
NUMBER = 67			

It could be said that all Education Officers and the Regional Task Force officials believe that the purpose of in-service training is mainly to update teachers skills and knowledge. The headmasters and teachers believe that in-service training should expose teachers to industries besides familiarizing them with the vocational syllabii.

Two problems encountered with the training of teachers were that,(a) no in-service training had started and (b) there were no suitable teachers in the schools operating the programme. All the fifty seven teachers and headmasters who answered this question stated that in-service training was already overdue.

5.3 Analysis of objective 3

This objective is concerned with the criteria used in selecting the pilot schools. Questions in this objective were administered to all 13 headmasters in the pilot schools and three Central Task Force officials.

The first question, "Why were these schools chosen to pilot this scheme?" had two categories of answers. These were; good workshop facilities and relevant teacher qualifications. The two answers were stressed as equally important.

The officials acknowledged that there were restrictions from the central level in the choice of pilot schools.

Availability of machines, adequate tools and teachers with the requisite qualifications would speed up the implementation process of the programme in schools. It was also stated that there were no funds set aside to buy extra machines.

It was acknowledged that the Central Task Force is composed of Curriculum Development Unit officials, college lecturers, other officials in the Ministry of Higher Education and Ministry of Primary and Secondary Schools.

It was said that people with knowledge in technical education were chosen by the Permanent Secretary of the Ministry of Higher Education to look into schools with better equipment and with teachers possessing the relevant qualifications to start the programme.

6. SUMMARY AND DISCUSSION

6.1 Summary of the results

The purpose of the study was to find out about the goals, implementation strategies and the possible obstacles of vocationalizing technical subjects in secondary schools.

When considering the first objective, that dealt with the aims three answers considered to be important were; (a) to provide students with self employment skills, (b) to provide skilled manpower and (c) to provide students with employable skills. Of the three answers, the provision of self employment skills was regarded as the most important.

There were differences on the question of fulfilling the aims of the new course. Whilst 72% of the respondents indicated that it was impossible to fulfill all the requirements 28% saw it as possible.

The reasons stated for not being able to fulfill the aims were; insufficient funds to buy materials, some machines were out of order, shortage of text-books, shortage of teachers with relevant qualifications to man the programme and lastly the time allowed for the programme was considered to be too little.

While it was acknowledged that there was no sex discrimination in the schools, other people said that girls were not enrolled in this programme. The reasons were that girls lacked interest, (motivation) they lacked encouragement from the teachers and that some schools anyway only enrolled boys.

Only a few people believed that this vocational education could have negative effects. Most of the people stated that the programme is government initiated but Education Officers Technical Subjects and Planning say that it is the government and the people who initiated it. The aim is to have all schools to participate in vocational programmes. It is hoped that the skills pupils acquire could make them employable in one way or another and so reduce the rate of unemployment among the school leavers.

Two important factors considered in selecting the pilot schools were the availability of machinery and other equipment in the workshops and suitable staff with relevant qualifications. This criteria was decided on in order to speed up the implementation exercise. A maximum number of sixteen pupils was required to pilot the programme in each of the schools selected. This number has not been constant in all schools. Some had as small a group as five pupils doing the programme. The reasons were that some pupils dropped out

because they found the programme too heavy to be completed in a period of two years time.
Efforts to twin the programme to industry were still unsuccessful.

Since the teachers, headmasters and the society at large were not involved in the planning of this programme, or informed about it well in advance, it could be said, the planning of the programme was not complete rationalistic.

Two syllabuses used in the pilot schools are the Zimbabwe National Craft Certificate (ZNCC) and Cambridge. The ZNCC has been allocated fourteen periods of forty minute each per week. These have been all fitted into the afternoon sessions.

There has not been any intensive in-service training of teachers to prepare them for the new programme. The need to update teachers skills and knowledge, to familiarise teachers with the new syllabus and to expose teachers to industry is well understood.

While some teachers and headmasters mentioned that they felt motivated to implement the programme, they were dissatisfied with the planning aspects of the programme from the top.

There are a lot of problems encountered in the implementation of vocational education in the pilot schools. These included lack of materials, books, some machines in the workshops were out of order, insufficient supply of tools and the shortage of teachers with relevant knowledge and qualifications in the subject area. The problem of timetabling the programme was considered as crucial. In some schools, lessons were taught during the week-ends in order to finish the projects set for the programme. The time allocated for the programme is considered too little.

6.2 Discussion of objective 1

Before discussing the topic, it is important to be clear about what the term vocational education means. Many authors and the subjects of this study share the view that vocational education is skill training aimed at producing workers for industries, or who can be self-employed. In the literature read, ORYSHKEWYCH (1982) suggests that vocational training can be offered in various places. These are; (1) on the job without any educational supervision; (2) it can be acquired in training programmes, departments or schools maintained by employers; (3) as apprentices attached to both industry and Polytechnic Colleges; (4) in trade technical secondary continuation or night schools; and (5) learning in shops according to some cooperative arrangement between industrial establishments and the schools. Of the five, the Zimbabwe Government aims to twin vocational education to industry. Twinning

vocational education to industry is considered an essential aspect in giving pupils first-hand experience of actual work places.

Basing the discussion on the results obtained, it may be argued that the purpose behind vocationalization of technical education is to integrate education, training and employment with a view to producing school leavers equipped with the requisite knowledge and skills that may lead to self employment, or that may enable students to secure jobs in the industry, and that may allow further training.

The rate of unemployment particularly among school leavers must have prompted the government to vocationalize education in the hope that this would alleviate this problem. Contributing factors to this crisis has been the tremendous expansion of secondary schools since independence in 1980. Another factor could be the type of curriculum that was stressed which laid emphasis on the teaching of academic subjects at the expense of vocational and technical subjects. The result has been that at the end of four years of secondary education, pupils left school without any recognized practical or technical skills to help them enter the world of work nor did they have the basic survival skills to engage in any form of self employment.

Although 30% of the teachers indicated that it was possible to meet all the aims, if given the time and resources, this in itself is not an easy task. Some of the machinery required for the programme are not available in our schools for example, the Spindle Moulder. Zimbabwe imports most of its machinery from overseas countries. With the shortage of foreign currency it is unlikely that spare parts or new machines, will be bought. It would be impossible for the government to supply schools with machines. Two alternatives to this problem could be, (a) to seek for help (aid) from donor agencies abroad or (b) to plead with local industries in the country to do the training required. It should be noted however that experience elsewhere has shown that foreign aid has 'strings' attached to it. The donors may dictate what machines or tools to give, how they should be used and in some instances where they could be used. In other words there is no selection to be done on the side of those who asked for help. The end result in such instances could be a supply of irrelevant machinery either too advanced or too small to be used in school situations in this programme.

Doing the training in industry could be the best solution. The ILO (1967) p. 71 comments that, "Industry should play a much greater and more active role in the training of its manpower than has been customary in either developing or industrialized nations. More training should be controlled to some appropriate extent by industry (ie) there should be a movement towards training centres and as much training as possible should be given in employment."

Although the suggested method of training skills at work places could be the best way of training the workforce, the situation in Zimbabwe had not yet allowed twinning of this programme to industries. The reasons behind could be purely political. To use Chikomba's words, (1988) p. 38 "The truth of the matter as things stand now is that blacks have political power and not economic control. The economic control is still under the grip of the whites." Since industries are still owned by the settlers, the government cannot dictate what they should do. Twinning of this programme to industries could only come about as a result of proper negotiations between the government and the industrialists.

Even in the event of industries accepting twinning the programme the number of pupils could not be unlimited. The limit could be set by lack of sufficient places or shortage of suitable people to supervise or monitor the work done by trainees. Training of skills under industrial attachment could be expensive too, since students need to be insured against injury or accidents. Some of these reasons could make industrialists reluctant.

Some of the schools have visited industries working with wood. These were attempts to give pupils some industrial exposure. However, mere school visits without the pupils getting involved in the actual work does not give the pupils the first-hand experience of working environments. The government should address itself fully to this problem if the programme is to yield fruitful results in the end.

With reference to table 5, page 41,

Sex stereo-typing seemed to exist in some of the schools. This could be caused by the way schools are organized and administered. Some schools do not enrol girls in subjects which were traditionally described as masculine for example building and woodwork. The solution to the problem could be a change in the way schools are organized. Schools should encourage boys and girls to compete equally in every subject. Teachers and headmasters should encourage girls to take up subjects previously dominated by boys. This may help to cut bridges that exists between the different sexes and the labels put on subjects offered in schools. In support of this, Matimati (1986) p. 25 comments that, "For as long as certain subjects remain 'male stuff' while others continue to be labelled 'female stuff' then efforts to remove discriminatory practices due to sex stereo-typing are likely to remain fruitless." Teachers could therefore be requested to help promote sex balance among pupils by involving them in subjects like wood work and home economics regardless of their sex. The even distribution of positions or responsibilities among boys and girls in schools for example, as school captains or class prefects could be a positive step too.

Though some people felt that vocational education has no bad effects, if not well planned, it could produce too many skilled people with no job prospects.

Production of skilled personnel needs to be properly matched to the expansion of industries. This may rarely be the case.

Adequate training of skills would require small classes to enable instructors to assist each individual trainee effectively. In big classes instructors may not have time for details. Trainees would not be thoroughly drilled in their fields of specialization. Small programmes taking a few trainees at a time could be easier for the government to fund.

Although the government promises that all schools will join the programme in the near future, this promise may be difficult to keep. The current shortages of machines, spare parts, textbooks for practical subjects and personnel to name just a few examples might not allow this. If problems in the few pilot schools could not be resolved at an early stage, what would the situation be like if more schools join the programme? It would be best if the Ministry of Education could look at the obstructions first and have these remedied before embarking on new phases. In his doctorate thesis about Rationality, Anarchy and the Planning of Change in Educational Organizations, Ellström, (1984) p. 61 discusses sequential relationships between the different phases in the rationalistic approach to planning. He argues that the carrying out of a second phase is dependent on the outcome of the first. If the first phase is unsuccessful, corrections are made to remedy the situation before attempting other new phases. Logically then, the Zimbabwe government should limit the number of schools and focus attention on these. These few schools must have the required books, materials and machines essential for the smooth running of the programme. Only then can the results of this project scheme be fairly evaluated.

It may be argued that with the high rate of unemployment in the country, those engaged in vocational education may gain in the end. This could come about if pupils organize themselves to start cooperatives of some kind using the knowledge and skills acquired at school. This would seem a positive step towards reducing unemployment. Unfortunately attempts to operate cooperatives have had little success. The people involved lacked managerial and accounting skills. These could be introduced in the school programme if the aim is to make these students self reliant.

To sum up, not everyone shares the same views about the goals of vocational education. Whilst some see it as mainly to provide skilled manpower to run the industries, some think that the purpose is to impart skills to pupils which they can use for self employment for example by forming cooperatives. Different opinions were also held on the possibility of fulfilling all the aims of vocational education. Whilst all Regional Task Force officials and Education Officers acknowledged that it was impossible to fulfill all the aims, 30% of the

teachers and 50% of headmasters thought it was possible to fulfill all the aims provided there was an adequate supply of materials, books and machines.

6.3 Discussion of objective 2

This discussion is about the implementation strategies that were adopted from the central to regional levels to have the pilot schools start the programme.

While an intention by the government to have vocational education introduced in secondary schools is seen as a positive step to overcome the unemployment situation by imparting technical skills to pupils, its implementation in the schools is proving difficult. Common problems encountered were as follows; (a) There is great shortage of materials to effectively carry out the practical work required. (b) Some of the machines in the workshops were in a state of neglect and in some cases were not functioning. These must be repaired if the programme is to be successful. (c) There is an extreme shortage of textbooks for practical subjects. (d) Teachers with the requisite knowledge and skills are scarce and the time allotted for the programme is considered too little. The problem of textbooks may be short-lived. The curriculum Development Unit (CDU) through the subject panel groups may be encouraged to write textbooks relevant to Zimbabwe. This may remedy the situation.

Although there are change agents i.e. Education Officers, and Task Force officials who go to schools to assist in implementing this programme, it may be argued that there is little they could assist with because some of the topics in the new woodwork syllabus for example might also be new to them. Probably two things they could do are; (a) organise courses for teachers conducted by specialists on certain topics in the syllabus. Such seminars could be held at the polytechnic colleges where facilities are suitable. (b) pressing the Ministry of Construction and Public Works responsible for maintaining and repairing government property to speed up in the repairing of machines.

The question of who controls the pilot schools could be viewed from two angles. Whilst it could be said that government controls most of the pilot schools, some are privately owned but grant aided. All government schools are supplied with tools, machines, books and other equipment necessary. There is very little pupils need to buy for themselves. In the private schools, companies or church organizations purchase tools and machines. However, Ministry of Education Officers pay visits to all schools for inspection purposes and to assist in the implementation of this programme.

The two syllabuses followed for this course, that is, the Zimbabwe National Craft Certificate (ZNCC) and the Cambridge may be difficult to cover over two years. The new course may require four years.

There was no extra allocation set aside by the government for this new course. The eight dollar per pupil per year grant is too little to buy materials that could be used for the course. Practical subjects are expensive. They require generous allocations of funds if they are to be meaningfully taught in schools.

The question of timetabling this programme raises a lot of doubts. Moyo, (1988) points out that there is no way practical skills can be acquired with a satisfactory degree of refinement unless the time table allows for this. Always placing practical subjects in the afternoons is not fair either to the subjects or the pupils. Pupils may lose respect for these subjects if they are always done after other lessons. Mathematics and Geography to mention only two subjects, are often timetabled for the mornings when pupils can be expected to be energetic. Learning and solving some practical problems in the workshops like design problems need fresh and energetic minds too.

The other problem that was being encountered in the schools studied was that of teaching load. The teachers responsible for taking vocational education were not exempted from other duties. Two teachers had a total load of forty two periods a week each which is not very normal for practical subjects. They received no extra pay so they felt that they were being exploited. Such cases may lead teachers with the requisite skills to leave teaching and join industry where they would earn more. Additional teachers to be responsible for pupils taking the Ordinary Cambridge syllabus may be a possible solution to this problem.

Zimbabwe National Craft Certificate (ZNCC) teachers need plenty of time to attend to those pupils taking the course if they are to complete the syllabus in two years. It could be argued that the introduction of the ZNCC may call for changes in the teaching methods. As earlier mentioned, the syllabus is demanding. It involves calculations required in the carpentry and building trades, drawing of plans and a lot of actual practical field work.

Building and carpentry would require different subject teachers to work together. Specialists would be needed to teach new topics in the syllabus. For example, "Principles of construction of ground floors in timber" would need a specialist with knowledge of wooden floors. A woodwork teacher might not have this special knowledge. A specialist would help pupils to understand the theory and to put, this into practice.

The current teacher training programme at Belvedere Teacher's College, which is the only college presently training technical subject teachers, and the Bachelor Degree courses for Technical

Subject teachers at the local University are not linked with the changes taking place in schools. While there is stress on workshop organization, teaching methods, wood-turning, wood-bending, decorative work in veneering, cabinet making to mention a few of the areas taught to students there is very little or no carpentry taught. Yet graduates from the University were deployed to teach vocational subjects in some of the pilot schools. The fact that the new syllabus stresses carpentry and joinery rather than cabinet making, means that these new teachers may find the expectations in schools different from what they were trained to teach. Experience has shown that adjustment is not always easy. This might result in a lot of frustration when teachers do not live up to the expectation of their pupils.

One major problem that has affected the programme is the lack of thorough in-service training to prepare teachers for the new course. Fullan and Pomfet (1981) in their review of implementation studies have stated five major steps that are essential for successful implementation of new programmes in schools. Firstly, they state that any new changes should be clearly understood by users in the local school. Not all the teachers in the pilot schools were informed about the aims and objectives of vocational education. The teachers who should implement the programme were excluded from the planning and also claimed that they were not given enough time to prepare.

Secondly, Fullan and Pomfet write that successful implementation usually depends upon intensive in-service training of teachers. No thorough in-service training was done to prepare teachers for the new programme. Vocational education workshop seminars held to familiarize teachers with the new syllabuses were not adequate. The questions we should ask ourselves are: How are the teachers going to confront the pupils? What new knowledge are they going to impart to the pupils? Are the teachers going to cope with the syllabuses? There is no doubt that unless urgent measures are taken to start intensive in-service training of teachers the examination results could be a disaster.

Thirdly, school personnel need adequate time and a good supply of materials during implementation. These have been some of the problems affecting the success of this programme in the pilot schools. There were not enough materials, the few books available were shared among pupils, and some of the machines required for the course were out of order.

Fourthly, continuous feedback on implementation efforts in schools is considered very important. There should be regular communication between the schools and the education planners. Problems encountered in schools should be reported to the Ministry of Education which should in turn help to alleviate these problems. Although problems experienced in these schools were made known to the Ministry of Education, it was claimed nothing had

been done at least not in terms of funds to purchase materials. Probably if parents were asked to assist in the funding of the programme they would have tried to help.

Fifthly, successful implementation is said to be related to the extent to which innovations meet local needs. Vocational education is argued to be an essential component of education which provides skills necessary for self employment or skills required by the industries. All the headmasters said that the local communities were happy about this programme being extended in the schools.

While it is argued that attempts to vocationalize education have been tried with very little success achieved, Stafford et. al. (1982) p. 243 acknowledge that, "this is partly due to the lack of knowledge about the needs of industry among the teachers who may never have worked in the industry themselves." He suggests that the first step to be taken towards introducing a broad vocational orientation into schools is to make information about industry more readily available to the teachers. It could be argued that most of our teachers lack this experience.

To sum up this objective, implementation involves a lot of different tasks of which the following are essentials; the dissemination of information to the public, intensive in-service training of teachers, adequate supply of materials, two way feedback, ample time to prepare for the new changes and last but not least the changes should meet local needs. No successful change can take place without the support of the public, innovators at different levels, for example teachers and education planners at the central or organizational levels. All these play important roles in implementation.

6.4 Discussion of objective 3

It was acknowledged that the criteria used by the Central Task Force group to choose pilot schools were; the adequacy of workshop facilities which included machines and other tools, and the availability of teachers with the requisite paper qualifications. In fact there could be a lot more teachers in the field with carpentry experience or who have worked in the building industry but who may lack the paper qualifications. Such people could have been registered to enable them to be trade tested by the apprentice board. This could help to supply teachers with the requisite qualifications and skills to schools that are currently operating without them.

While the selected pilot schools were chosen because teachers had the requisite qualifications, one snag discovered was that these lacked the training in teaching methods. Although highly skilled in the craft, these still need pedagogical training if they are to be effective in their teaching.

Though the Central Task Force group is composed of top officials in the Ministry of Education, Education Officers responsible for Technical Subjects, college lecturers, and the Curriculum Development Unit officials (CDU) all with background knowledge in technical education, it lacked the representation of a few (experienced) teachers. Since teachers are the implementors of the programme, they would have contributed by mentioning some of the problems expected.

It was acknowledged that to speed up the implementation exercise, schools with good workshop facilities were chosen. While this point may have warranted support from ministry officials it could be that this was necessitated by the current shortages of machines and spare parts in the country. However it may also be argued that the programme lacked thorough planning since it did not take account of the heavy expenses involved in introducing vocational education even for this limited number of pilot schools.

The current realities of our economy does not allow us to vocationalize our entire education system. Therefore it may be a good idea to concentrate this programme on a limited number of schools which will receive sufficient money to properly implement it.

6.5 Conclusion

The research study found that implementation of vocational education in the pilot schools was proving to be very difficult. These difficulties could be resolved before more schools join the programme. The difficulties are the shortage of machines, books, materials and staff with the requisite qualifications. But planning has contributed to these difficulties. The planning process has been largely monolithic, done by top government officials with little consultation. If teachers had participated problems might have been foreseen and resolved before embarking on the programme. Many writers contend that good planning recognises constraints and limitations. The success of this programme depends not only on sensible realistic planning but also on the commitment of all those involved in it. Ministry officials may need to revise their planning strategies and, at the same time, fund the programme generously.

To sum up the discussion, it was found out that the respondents were very familiar with the term vocational education. Of the sixteen teachers interviewed fifteen defined the term as mainly concerned with skill training relevant to the world of work (industry) as well as to self -employment. This view was shared by all the Education Officers and Regional Task Force officials.

The subjects had different views about the aims of vocational education. Some said that it was to provide enough skilled manpower and to provide pupils with self employment skills. Some thought the aim of the programme was as a foundation for further studies in technical education.

Not all subjects shared the same views as to the question of fulfilling all the aims and objectives set for this programme. The reasons given for not fulfilling all the aims were stated as shortage of materials to effectively run the course, insufficient books, lack of teachers with relevant qualifications and lack of funds to buy the needed equipment. The time allotted to the programme was considered too little.

The implementation of the programme was proving difficult. The reasons given were as stated above. Officials, teachers, and headmasters all agreed that no in-service training had been conducted to prepare teachers for the new programme.

Schools with good workshop facilities and a teacher with relevant qualifications were chosen to pilot this programme. This criteria was used to speed up the implementation exercise in schools.

6.6 Limitations and their implications on the study

Despite carrying out the research at a very busy period i.e. examination time, most respondents were very co-operative and freely expressed their feelings about the programme as well as the problems encountered.

Of the estimated target population of eighty (80) subjects, only seven did not return the questionnaires. The questionnaires arrived after the schools had closed. These two schools were in the rural areas where transport is not very efficient.

The last question on the questionnaire sheets answered by teachers was not quite clear. The question intended respondents to name problems related to in-service training. Some respondents indicated problems that may be expected in schools as a result of carrying out in-service training. An example of the problem given was the shortage of teachers to man classes. This was however a related problem to the question. Except for this minor flaw, the research instruments used, that is, the structured interviews, documents from the Ministry of Education, and the questionnaires worked well.

6.7 Recommendations

Since this was a new programme which had just been introduced in the schools it could be argued that this research was carried out too early and before a lot of things had settled down. There is need therefore for this research to be replicated in a few years time.

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APPENDICES

Note: The interview sheets and questionnaires are exactly as they were when the research was conducted except that the author has entered the answers.

Appendix A 1

Ministry of Education
Midlands Region
Box 737
Gweru
14-11-88.

Dear Sir

Questionnaires for Headmasters and Technical Subject Teachers.

Instructions:

(1) Answer as freely as possible.

(2) You can use the back side of the questionnaire paper if more space is required.

Will you please help and answer the questionnaires enclosed. The purpose of the exercise is to find out about the goals, implementation strategies and the possible constraints of the proposed scheme of vocationalisation of technical subjects in secondary schools currently on pilot scheme in subject areas like woodwork, metalwork and building.

The results obtained from the exercise will be solely used for academic purposes as a partial fulfilment of an MA in technical subjects at Linköping University Sweden.

Permission has been granted by the Ministry of Education to carry out this study in the pilot schools. No names of respondents or schools shall appear in the writing. Questionnaires had been coded for follow up purposes only.

Enclosed is an addressed and stamped envelope to be used in returning the completed questionnaires.

If there is an information you require or not clear about contact the above address or telephone (2160) during business hours or (7037) after working hours.

Your cooperation is much appreciated in this exercise.

Yours Faithfully
Stenford Museva.

TEACHER INTERVIEWS

QUESTION

How long have you been teaching in this school?

CATAGORIES:

Up to 1year = 5 Teachers

Between 2-3years = 4

Between 4-5 = 3

Between 6-10 = 3

between 11-15 = 1

Total = 16 Total = 16

Did you have any other form of employment before joining the teaching field?

Categ:	yes	no	
	3	13	Total = 16

What form of employment?

Categ.	Carpenter	Metrological officer	
	2	1	Total= 3

What is your position in the technical department?

Head of Department.	Teacher:	
3	13	Total =16

How long is your teaching experince in technical subjects?

(a)1year=4. (b)2yrs=2. (c)4yrs=1. (d) 5yrs=1. (e)7yrs=2. (f)10yrs=2

(g)13yrs=1. (h) 15yrs=2 (i) 27yrs=1 Total = 16

How long was your duration of training?

Categ.

5yrs:	4yrs:	3yrs:	
3	5	8	Total =16

PART B

AIMS AND OBJECTIVES

What does vocational education mean to you?

Categ.	(a)Skill Training	(b)Teaching Practical Subjects	
	15	1	Total = 16

What does it involve?

Categ.	(a) Use of Tools	(b)Machinery & Hand Tools	
	9	7	Total =16

What are the aims and objectives of vocational education?

Categ:	Self Employment.	Skilled Manpower.	Employable skills.	
	7	2	7	Total=16

Why do you think these aims and objectives are important in the syllabus?

Categ:	Self Employment.	Skilled Manpower.	
	12	4	Total =16

Do you think its possible to fulfill all the aims and objectives?

Categ:	yes	no	
	7	9	Total=16

Woodwork, metal work and building are by tradition work for men will girls be enrolled in this vocational education?

Categ:	yes	no	
	14	2	Total=16

PART C

IMPLEMENTATION IN THE SCHOOL:

What do you think the school can gain or lose by participating in this vocational programme?

Categ: Repair Work Status Nothing to Lose.

7 2 7 Total=16

Who do you think will gain and what and who will lose and what when the new vocational education works?

Categ: Student gets Employment. Student can further train

6 7

Not sure 3 Total=16

What does this vocational education fulfill in the school or in the local society near the school?

Categ: Self reliance

16 Total=16

Who were involved in the planning of this education?

Categ: Government

16 Total=16

How has this education been planned in the school?

Categ: Selection of a few pupils. These take lessons in the afternoons

16 Total=16

How motivated are you with regards to this vocational programme?

Categ: Motivated. Not Motivated.

15 1 Total=16

What can you comment about the programme?

Categ: Good Bad Ambitious

14 1 1 Total=16

What can you comment about planning?

Categ: Bad

16 Total=16

Do you think you will teach in a different way than you do today?

Categ: yes no

5 11 Total = 16

At what educational level do pupils start studying for zncc?

Categ: Form 3 Total= 16

What are the reasons for this?

Categ: Ministry policy

16 Total=16

Do you see any need for involving other specialists in this programme as far as teaching is concerned?

Categ: yes no

16 0 Total=16

PART D

IN-SERVICE TEACHER TRAINING

Is there any form of training required to teach in the new vocational education?

Categ: yes no

14 2 Total=16

If yes what do you think is helpful in the training?

Categ: Update skills

Total=16

If no: why do you not see any problem?

Categ: N/A

Do you see any problems with this training programme?

Categ:	yes	no	
	14	2	Total=16

QUESTIONNAIRES FOR TEACHERS (TECHNICAL SUBJECTS)

How long have you been teaching in this shool?

Categ:	1 year.	2yrs.	3yrs.	4yrs.	5yrs.	6yrs.	8yrs.	9yrs.
	4	6	4	3	1	5	2	1

10yrs.	11yrs.	13yrs.	28yrs.	29yrs.	
1	1	1	1	1	Total=31

Did you have any other form of employment before joining the teaching field?

Categ:	yes	no	
	16	15	Total=31

If yes: What form of employment?

Categ:	Carpenter.	Machine Operator.	Metro. Officer.	Data Processor.
	3	1	1	1

Typist	Temp.tr.	Sales rep.	Tax collector.	Bank clerk.	
2	4	2	1	1	Total=16

Do you know the aims and objectives of vocational education?

Categ:	yes	no	
	26	5	Total=31

If yes: why do you think these aims and objectives are important ?

Categ:	self employment.	skilled manpower.	Improve status tech.sub.	
	20	10	1	Total=31

If no: How come that you are not informed about the new syllabus?

Categ: N/A

Do you think its possible to fulfill all the aims and objectives?

Categ:	yes	no	
	7	24	Total=31

Woodwork, metalwork and building are by tradition work for men will girls be able to enrol in this vocational education?

Categ:	yes	no	
	22	9	Total=31

If yes: Do you think they will do that?

Categ:	yes	no	
	14	17	Total=31

If no: why can they not enrol?

Categ:	Lack encouragement	Lack interest	Boys Sch. only	
	16	9	6	Total=31

Have you been engaged in the planning of this education?

Categ:	yes	no		
	0	31	Government planned	Total=31

What can you comment about the programme?

Categ	good	bad	ambitious	challenging	
	21	2	4	4	Total=31

What can you comment about the planning?

Categ:	good	bad	
	6	25	Total=31

Do you think you will teach in a different way than you do today?

Categ:	Yes	No	
	22	9	Total=31

Is there any form of training required to teach in the new vocational education?

Categ:	Yes	No	
	30	1	Total=31

If yes: What do you think is helpful in this training?

Categ:	familiarise with syllabus.	exposure to Ind.	update Skills.	
	12	18	1	Total=31

If no: Why do you not see any need for training ?

Categ. N/A

Do you see any problems with this training programme?

Categ.	Yes	No	
	23	8	Total=31

What problems?

Categ.: time factor. Its long overdue. (Tr. shortage in schools.)

23		Total=23

Appendix D 1

INTERVIEW FOR HEADMASTERS

Why has this school been chosen to pilot this scheme of vocationalisation?

Categ: Good workshop facilities — Relevant tr. qualifications

All-3 — All-3 — Total = 3

How long has the school been offering technical subjects?

Categ: More than 20 yrs — More than 15yrs

1 — 2 — Total =3

How helpful has been these subjects to your school leavers in terms of employment prospects and enabling further studies?

Categ: Not much help — Has improved of late

1 — 2 — Total=3

What are the views of the local people/community concerning the teaching of technical subjects in the school?

Categ: Positive

3 — Total=3

PART B

Aims and objectives

What does vocational education mean to you?

Categ: skill training

3 — Total=3

What are the aims and objectives of this new vocational education?

Categ: Self employment — Provide employable skills

1 — 2 — Total=3

Why do you think these aims and objectives are important?

Categ: Self employment Provide skilled manpower

2 1 Total =3

Do you think its possible to fulfill all the aims and objectives?

Categ: Yes No

0 3 Total =3

If yes: How is this possible?

Categ : N/A

If no: What could be the obstacles?

Categ: Lack of equipment Books & manpower shortages

2 1 Total=3

Woodwork, metalwork and building are by traditional subjects for men, Can girls be enrolled in this vocational education?

Categ: Yes No

3 0 Total =3

PART C

IMPLEMENTATION IN THE SCHOOL

What do you think the school can gain or lose by participating in this programme?

Categ: Prestige Raise money/Sale of projects.

1 2 Total = 3

How known are the aims and objectives of this new programme to the teachers?

Categ: All teachers Technical subject teachers

1 2 Total=3

Who do you think will gain (and what) and who will lose (and what) when this vocational programme works?

Categ: Student gains--Better Employ. Government gets-Good Employees.

1 1

Employer gets--Skilled Manpower.

1 Total=3

Do you see this vocational education fulfill any needs in the school or in the local society near the school?

Categ: Yes No

3 0 Total=3

If yes: How are they fulfilled?

Categ. Repair Work. Making School Furniture.

2 1 (Self Reliance) Total=3

If no: Why doing vocational education?

Categ: N/A

Who were engaged in the planning of this new vocational education?

Categ: Ministry of Education.

3 Total=3

How has this been planned in the school?

Categ: Selection of few Pupils Afternoon Time Table

All 3 All 3 Total=3

How will the new vocational education affect your daily work?

Categ: Not affected.

3 Total=3

How motivated are you and your teachers with regards to this vocational programme?

Categ: Motivated. Not Motivated.

2 1 Total=3

PART D

IN-SERVICE TEACHER TRAINING

Has there been any in-service teacher training as regards to this new programme?

Categ: Yes No

0 3 Total=3

What need does this in-service training try to fulfill?

Categ: Familiarization with new Syllabus

3 Total=3

How has this been planned?

Categ: Ministry of Higher Education & Min. of Prim.& Sec. Schools

1 Total=3

When did it start/ When will it start?

Categ: Not started Will start early 1989

2 1 Total=3

What is the programme like?

Categ. Workshop Seminars

3 Total=3

What problems are encountered with this training programme?

Categ. Not Started. No suitable Trs. in Schools.

All 3 Total=3

QUESTIONNAIRE FOR HEADMASTERS

Why do you think this school has been chosen to pilot the scheme of vocationalisation?

Categ:	Good workshop facilities	Relevant tr. qualifications	
	3	4	Total=7

Why do you think the aims and objectives in the new vocational syllabii are important?

Categ:	Provide employable skills	Provide skilled manpower	
	6	1	Total=7

Do you think its possible to fulfill all the aims and objectives?

Categ:	Yes	No	
	5	2	Total=7

Wood work, metalwork and building are by tradition work for men will girls be able to enrol in this vocational education?

Categ:	Yes	No	
	5	2	Total=7

If yes: Do you think they will do that?

Categ:	Yes	No	
	5	2	Total=7

IF no: Why can they not enrol?

Categ:	Lack motivation	Prefer Home Economics	
	1	1	Total=2

What do you think the school can gain or lose by participating in this programme?

Categ: Enrolment increases: (Sch) Do not know as yet.

2 5 Total=7

Do you see this vocational education fulfill any needs in the school or in the local society near the school?

Categ: Yes No

7 0 Total=7

If Yes: What are the needs?

Categ: Repair work Construction work

2 5 (Self-Reliance) Total=7

How are they fulfilled?

Categ. Furniture making & repairs. Making roofs & shuttering.

2 5 (Self-Reliance) Total=7

If no: Why not?

Categ: N/A

Who has been engaged in the planning of this new vocational education?

Categ: Ministry of Education.

7 Total=7

How motivated are you and your teachers with regards to this new programme? Categ: motivated Not motivated

5 2 Total= 7

Has there been any in-service teacher training as regards to this new programme?

Categ:	Yes	No	
	0	7	Total=7

If yes: What need does this in-service training try to fulfill?

Categ:	Industrial exposure & safety regulations	Familiarise with new syllabus	
	5	2	
			Total=7

How has this been planned?

Categ:	Min. of Higher Education & Min. of Primary & Sec. Education.	
	7	Total=7

If no: Is there no need for this in-service programme?

Categ:	There is need.	
	7	Total=7

CENTRAL TASK FORCE

CRITERIA USED

How is the task force formed?

Categ. CDU members. few college lecturers. officials Min. (2) of Educ.

All 3 All 3 All 3 Total =3

Could there be some reasons as to why it has been formed in that manner?

Categ: Yes No

3 0 Total=3

What are the reasons?

Categ: Knowledge in techn. education. Selection from Secretary.

2 1 Total=3

Did you have any restrictions from the central level in chosing the pilot schools?

Categ: Yes No

3 0 Total =3

What criteria was used ?

Categ: Good workshop facil. (Mech.&Tools) relevant tr. qualifications.

1 2 Total=3

Why was this criteria chosen?

Categ: To speed up implementation. 3 Total=3

How many schools will participate in this programme in the near future?

Categ. More schools. All schools.

2 1 Total=3

How do you look upon the necessity of twinning this programme to industry?

Categ. Twinning is necessary.

3 Total=3

How do you see industrialists entertaining the programme of twinning?

Categ. Response is negative but the situation might improve.

3 Total = 3

How do you see industry's influence in compiling the curricula content in this new vocational programme?

Categ. Industry is influential.

3 Total=3

What role can you see these pilot schools play in the near future with regards to this programme of vocationalisation?

Categ. Information centres. No role.

2 1 Total=3

STRUCTURED INTERVIEW FOR REGIONAL TASK FORCE OFFICIALS

PART A

AIMS AND OBJECTIVES

What is vocational education about?

Categ: Skill training

4 Total=4

Why is it important for this country?

Categ: Provide skilled manpower. Create self employment.

1 3 Total=4

What are the aims and objectives of this vocational education?

Categ: Provide self employ. Provide skilled manpower. Employable skills.

1 1 2 Total=4

Why these aims?

Categ: Reduce unemployment. Provide with employable skills.

3 1 Total=4

Can all these aims be fulfilled?

Categ: Yes No

0 4 Total=4

Has this vocational education emanated from the people or has this been government decision?

Categ: Gvt. and people. Government.

0 4 Total=4

Will girls be enrolled in this vocational education?

Categ: Yes No

4 0 Total=4

Will there be any side effects from this vocational education?

Categ:	Yes	No	
	0	4	Total=4

How many schools will participate in this vocational education in the near future?

Categ:	All schools.	
	4	Total=4

PART B

IMPLEMENTATION FROM CENTRAL TO LOCAL LEVEL:

To what extent does the government control and rule the pilot schools?

Categ:	No control	Little control	
	1	3	Total=4

Do you have any change agents helping the schools in implementing vocational education?

Categ:	Yes	No	
	4	0	Total=4

How motivated do you think the headmasters and teachers are with regards to this vocational programme?

Categ:	Motivated	Slightly motivated	Not motivated	
	2	1	1	Total=4

Will everyone win or can you see any loser in this programme?

Categ:	All may win	Few may win	They will be losers	
	2	1	1	Total=4

PART C

IMPLEMENTATION IN THE SCHOOLS

Will all the teachers be involved in this vocational programme?

Categ:	Yes	No	
	0	4	Total =4

What syllabii will be used in schools offering vocational education?

Categ: ZNCC and Cambridge

4	Total=4

Who were involved in compiling the syllabii?

Categ:	Polytechnic Colleges	Ministry of Higher Education	
	3	1	Total=4

Will there be any difference from the syllabii currently being used in other secondary schools?

Categ:	Yes	No	
	4	0	Total=4

Do you think teachers will teach in a different way than they do today?

Categ:	Yes	No	
	4	0	Total=4

Do you see any need for involving other specialists in this programme as far as teaching is concerned?

Categ:	Yes	No	
	4	0	Total=4

What is the time allocation for this programme?

Categ: 14 Periods per week of 40 minutes each. Total=4

At what level do pupils start studying for the ZNCC?

Categ: Form 3

4 Total=4

Is there any evaluation planned for this vocational syllabii?

Categ:	Yes	No	
	4	0	Total=4

PART D

IN-SERVICE TRAINING

Is there any form of training required by teachers as far as this programme is concerned?

Categ:	Yes	No	
	4	0	Total=4

What needs does this in-service training try to fulfill?

Categ: Update teachers skills & knowledge

4 Total=4

How is this planned?

Categ: Ministry of Higher Education

4 Total=4

When will it start or when did it start?

Categ: Early 1989

4 Total=4

What is the programme like?

Categ:	Not started	Seminars held	
	All 4 agree	4	Total =4

CDU OFFICIALS

What syllabi will be used in schools offering vocational education?

Categ ZNCC &Cambridge.

3 Total=3

Will there be any difference from the syllabi currently being used in other secondary schools?

Categ:	Yes	No	
	3	0	Total=3

What considerations have been taken into account in making the aims and objectives of this vocational education?

Categ:	Self Employment.	Employable SKills.	
	2	1	Total=3

What is the time allocation for this programme?

Categ: 14 Periods per Week.

3 Total=3

To what extent do you think these aims and objectives will be met in the schools?

Categ:	All will be met.	Some will be met	
	0	3	Total=3

Did you see any need in consulting other people with knowledge in vocational education in compiling the syllabi ?

Categ Yes =3 No=0 Total=3

Is there any evaluation planned for the new syllabi ?

Categ	Yes	No	
	3	0	Total=3

EDUCATION OFFICERS TECHNICAL SUBJECTS

PART A

AIMS AND OBJECTIVES

What is vocational education about?

Categ: Skill training

3 Total=3

Why is important for this country?

Categ: Create self employment

3 Total=3

What are the aims and objectives of this new vocational education?

Categ Provide skilled manpower Skills for self employment

1 2 Total=3

Why these aims?

Categ Reduce unemployment

3 Total=3

Can all these aims be fulfilled?

Categ	Yes	No	
	0	3	Total=3

Has this vocational education emanated from the people or has this been government decision?

Categ Government and people

3 Total=3

Woodwork, metalwork and building are by tradition work for men will girls be enrolled in this vocational education?

Categ:	Yes	No	
	3	0	Total=3

Will there be any side effects from the education system?

Categ:	Yes	No	
	1	2	Total=3

How many schools will participate in this vocational education in the future?

Categ:	All schools	
	3	Total=3

PART B

IMPLEMENTATION FROM CENTRAL TO LOCAL LEVEL

To what extent does the government control and rule these schools?

Categ:	Little extent	No control	
	1	2	Total=3

Have you any change agents helping the schools in implementing vocational education?

Categ:	Yes	No	
	3	0	Total=3

How motivated do you think headmasters and teachers are with regards to this programme: Categ: Motivated . Slightly motivated. Not motivated.

1 1 1 Total=3

Will every one gain or can you see any loser in this programme?

Categ. All will gain No loser

3 0 Total=3

Will all teachers be involved in this programme?

Categ Yes No

0 3 Total=3

PART C

IMPLEMENTATION IN THE SCHOOLS

What syllabii will be used in schools offering vocational education?

Categ. ZNCC and Cambridge.

3 Total=3

Who were involved in compiling the syllabii?

Categ. Ministry of Higher Education. Total=3

Will there be any difference from the syllabii currently being used in other secondary schools offering technical subjects?

Categ: Yes No

3 0 Total=3

Do you think teachers will teach in a different way than they do today?

Categ	Yes	No	
	3	0	Total=3

What is the time allocation?

Categ: 14 periods per week Total=3

At what level do pupils start studying for the ZNCC?

Categ: Form 3

3 Total=3

Is there any evaluation planned for this new vocational syllabii?

Categ	Yes	No	
	3	0	Total=3

PART D

IN-SERVICE TRAINING

Is there any form of training required by teachers as far as this programme is concerned?

Categ	Yes	No	
	3	0	Total=3

What needs does this in-service training try to fulfill?

Categ: Update teacher skills and acquiring new knowledge

3 Total =3

How is this planned?

Categ: To start early 1989

3 Total=3

What is the programme like?

Categ: Presently workshop seminars

3 Total=3

What problems are encountered with this training programme?

Categ: In-service not started

3 Total=3

E.D. PLANNING

AIMS AND OBJECTIVES

What is vocational education about?

Categ: Skill training

3 Total=3

Why is it important for the country?

Categ: Provide skills for self employment. Skilled manpower

1 2 Total =3

What are the aims and objectives of this vocational education?

Categ: Provide with self employment skills

3 Total=3

Why these aims?

Categ: Reduce unemployment

3 Total=3

Can all these aims be fulfilled?

Categ	Yes	No	
	0	3	Total=3

Has this vocational education been planned by people or has this been government decision?

Categ: Government and people

3 Total= 3

Total Woodwork, metalwork and building are by tradition work for men will girls be enrolled in this vocational education?

Categ	Yes	No	
	3	0	Total=3

Will there be any bad side effects from this education system?

Categ: Yes No

2 1 Total=3

How many schools will participate in this vocational education in the future?

Categ: All schools

3 Total=3

PART B

IMPLEMENTATION FROM CENTRAL TO LOCAL LEVEL

What kind of implementation strategy has been used?

Categ: Rationalistic approach

Total=3

To what extent do you control and rule the pilot schools?

Categ: No control

3 Total=3

Do you believe in an analytic-rational process of planning?

Categ: Yes No

3 0 Total= 3

Have you got an change-agents helping the schools in implementing vocational education?

Categ: Yes No

3 0 Total=3

How motivated do you think the headmasters and teachers are with regards to this new vocational education in the schools?

Categ: Motivated Not motivated

1 2 Total=3

Will every one gain or can you see any loser in this new vocational education.?

Categ: All will gain No loser

3 0 Total=3

Will all the teachers be involved in this vocational education?

Categ: Yes No

0 3 Total=3

PART C

IN-SERVICE TRAINING

Is there any form of training required by teachers as far as implementing this programme is concerned?

Categ: Yes No

3 0 Total=3

What needs does this in-service training try to fulfill?

Categ: Update teachers skills and acquiring new knowledge

3 Total=3

How is this planned?

Categ: Ministry of Higher Education & Min. of Primary and Secondary

3 Total=3

When will this start or when did it start?

Categ. Will start early 1989

3 Total=3

What is the programme like?

Categ: Not started Workshop seminars held:

2 1 Total=3

What are the problems encountered with this training programme?

Categ: In-service not started. Shortage of trs. with relevant knowl.

3 Total=3